CLAIM AMENDMENTS

1. (currently amended) A method of making a strained layer on a substrate, the method comprising ~~(1, 2) with~~ the steps of:

providing on the substrate in a single epitaxial deposit at least one first epitaxial relaxing layer and on it a second epitaxial layer to be subjected to strain;

generating with ion implantation a defect region [[(99)]] in a layer [[(1, 2, 4, 6)]] neighboring the second layer [[(3, 5)]] to be subjected to strain, and

relaxing at least one layer [[(4, 6)]] neighboring [[to]] the second layer [[(3, 5)]] to [[be]] strain ~~ed to form~~ the ~~strained~~ second layer.

2. (currently amended) The method according to ~~the preceding claim in which~~ claim 1 wherein dislocations extend from a defect region which give rise to a relaxation of one of the layers [[(4, 6)]] neighboring the layer [[(3, 5)]] to be strained.

3. (currently amended) The method according to ~~one of the preceding claims characterized in that~~ claim 1 wherein the one layer ~~structure~~ is subjected to at least one thermal treatment [[and/]] or oxidation for relaxation.

4. (currently amended) The method according to ~~one of the preceding claims characterized in that~~ claim 1 wherein the defect region [[(99)]] is produced in the substrate [[(1)]].

5. (currently amended) The method according to ~~one of the preceding claims characterized in that~~ claim 1 wherein at least one first layer [[(6)]] is ~~epitactically~~ epitaxially deposited on the layer [[(5)]] to be strained.

6. (currently amended) The method according to ~~one of the preceding claims characterized in that~~ claim 5 wherein the first layer [[(6)]] has a different degree of dislocation than the second layer ~~(5) to form the strained layer~~.

7. (currently amended) The method according to ~~one of the preceding claims characterized in that~~ claim 5 wherein the first layer [[(6)]] is relaxed.

8. (currently amended) The method according to ~~one of the preceding claims characterized in that~~ claim 1, further comprising the step of

depositing a further layer between the layer [[(5)]] to be strained and the substrate ~~(1, 2) a further layer (4) is disposed~~.

9. (currently amended) The method according to ~~one of the preceding claims characterized in that~~ claim 8 wherein the further layer [[(4)]] has a different degree of dislocation than the layer [[(5)]] to be strained.

10. (currently amended) The method according to ~~one of the preceding claims characterized in that~~ claim 1 wherein a plurality of layers [[(4, 6)]] are relaxed.

11. (currently amended) The method according to ~~one of the preceding claims characterized in that~~ claim 1 wherein a plurality of layers [[(3, 5)]] to be strained [[,]] are strained.

12. (currently amended) The method according to ~~one of the preceding claims in which~~ claim 1 wherein an ~~epitactic~~ epitaxial layer structure comprised of a plurality of layers on different substrates [[(1, 2, 3, 4, 5, 6)]] is made in a single deposition process.

13. The method according to ~~one of the preceding claims characterized in that~~ claim 1 wherein applied layers are thereafter removed.

14. (currently amended) The method according to ~~one of the preceding claims characterized in that~~ claim 1 wherein at least one strained layer [[(5)]] is produced on a thin relaxed layer [[(4)]].

15. (currently amended) The method according to ~~one of the preceding claims characterized in that a removal of~~ claim 1, further comprising the step of

removing a layer by means of ~~implantation, especially by means of~~ hydrogen or helium implantation ~~is carried out~~.

16. (currently amended) The method according to ~~one of the preceding claims characterized in that~~ claim 1 wherein the defect region ~~produced~~ is used as a separating plane.

17. (canceled)

18. (currently amended) The method according to ~~one of the preceding claims characterized in that~~ claim 1 wherein for [[an]] ion implantation, hydrogen ions [[and/]] or helium ions are ~~selected~~ used.

19. (currently amended) The method according to ~~one of the preceding claims characterized in that~~ claim 1 wherein ions with a dose of 3×10^{15} through 4×10^{16} cm^{-2} are ~~selected~~ used for producing the defect region [[(99)]].

20. (currently amended) The method according to ~~one of the preceding claims characterized in that~~ claim 1 wherein Si ions are ~~selected~~ used for the implantation.

21. (currently amended) The method according to ~~one of the preceding claims characterized in that~~ claim 1 wherein a dose of 1×10^{13} to 5×10^{14} cm^{-2} is used to produce the defect region [[(99)]].

22. (currently amended) The method according to ~~one of the preceding claims characterized in that~~ claim 1 wherein for the implantation, hydrogen ions, carbon ions, nitrogen ions, fluorine ions, boron ions, phosphorous ions, arsenic ions, silicon ions, germanium ions, antimony ions, sulfur ions, neon ions, argon ions, krypton ions or xenon ions or an ion type of the layer material itself is used for producing the defect region [[(99)]].

23. (currently amended) The method according to ~~one of the preceding claims characterized in that~~ claim 1, further comprising the step of

effecting a relaxation over a limited region of at least one layer ~~(4, 6) is effective~~.

24. (currently amended) The method according to ~~one of the preceding claims characterized in that~~ claim 1, further comprising the step of

arranging a mask ~~(66) is arranged~~ on the layers ~~structure~~.

25. (currently amended) The method according to ~~one of the preceding claims characterized in that~~ claim 1 wherein the one layer ~~structure~~ is relaxed only on the implanted region [[and/]] or is stressed.

26. (currently amended) The method according to ~~one of the preceding claims characterized in that~~ claim 1 wherein the one layer ~~structure~~ is primarily irradiated with ions.

27. (currently amended) The method according to ~~one of the preceding claims in which~~ claim 1 wherein hydrogen [[and/]] or helium is implanted to a considerable depth and during a subsequent heat treatment, collects in a defect region and thus enables separation.

28. (currently amended) The method according to ~~one of the preceding claims characterized in that~~ claim 27 wherein the dose for the hydrogen [[and/]] or helium implantation can be reduced for the separation.

29. (currently amended) The method according to ~~one of the preceding claims characterized in that~~ claim 1 wherein in the layer~~s~~ ~~structure~~ primarily crystal defect [[and/]] or in the substrate proximal to the ~~epitactic~~ epitaxial layer ~~structure~~ an extended defect region [[(99)]] is produced.

30. (currently amended) The method according to ~~one of the preceding claims characterized in that~~ claim 1 wherein the energy of the implanted ion~~s~~ is so selected that the mean range is greater than the total layer thickness of the ~~epitactic~~ epitaxial layer ~~structure~~.

31. (currently amended) The method according to ~~one of the preceding claims characterized in that~~ claim 1 wherein the thermal treatment is carried out in a temperature range of 550 degrees C to 1200 degrees C ~~, especially from 700 degrees C to 950 degrees C~~.

32. (currently amended) The method according to ~~one of the preceding claims characterized in that~~ claim 1 wherein the thermal treatment is carried out in an inert, reducing, nitriding or oxidizing atmosphere.

33. (currently amended) The method according to ~~one of the preceding claims characterized in that~~ claim 1 wherein the dislocation density after the growth amounts to less than 10^5 cm^{-2}.

34. (currently amended) The method according to ~~one of the preceding claims characterized in that~~ claim 1 wherein a strained layer ~~(5') and/~~ or an unstrained layer [[(5)]] with a surface roughness of less than 1 nanometer are produced.

35. (currently amended) The method according to ~~one of the preceding claims characterized in that a~~ claim 1 wherein layers ~~structure~~ comprising silicon, silicon-germanium [[(Si-Ge)]] or silicon-germanium-carbon [[(Si-Ge-C)]] or silicon carbide ~~(Si-C) is~~ are deposited upon [[a]] the substrate [[(1)]].

36. (currently amended) The method according to ~~one of the preceding claims characterized in that a~~ claim 1 wherein layers ~~structure~~ comprised of a III-V ~~compound semiconductor, especially a III-V~~ nitride, a II-VI compound semiconductor or an oxidic perovskite is deposited on the substrate [[(1)]].

37. (currently amended) The method according to ~~one of the preceding claims characterized in that~~ claim 1 wherein Si-Ge is used as the material for at least one of the layers [[(4, 6)]] to be relaxed.

38. (currently amended) The method according to ~~one of the preceding claims characterized in that~~ claim 1 wherein two Si-Ge layers [[(4, 6)]] are relaxed.

39. (currently amended) The method according to ~~one of the preceding claims characterized in that~~ claim 1 wherein at least one layer with an additional carbon content of one to two atomic percent is provided and ~~in which relaxation is carried out~~ is relaxed.

40. (currently amended) The method according to ~~one of the preceding claims characterized in that~~ claim 1 wherein an SOI substrate ~~(1, 2, 3) (silicon on insulator)~~ is ~~selected~~ used.

41. (currently amended) The method according to ~~one of the preceding claims characterized in that~~ claim 1 wherein an Si layer [[(3, 5)]] with a layer thickness below 200 nanometers is ~~selected~~ used.

42. (currently amended) The method according to ~~one of the preceding claims characterized in that~~ claim 1 wherein silicon, silicon germanium [[(Si-Ge)]], silicon carbide [[(Si-C)]], sapphire or an oxidic perovskite or a III-V or II-VI compound semiconductor is ~~selected~~ used as the substrate [[(1)]].

43. (currently amended) The method according to ~~one of the preceding claims characterized in that~~ claim 1 wherein a wafer bonding is carried out.

44. (currently amended) The method according to ~~one of the preceding claims characterized in that~~ claim 1 wherein the layers are ~~structure is~~ bonded to a second substrate.

45. (currently amended) The method according to ~~one of the preceding claims characterized in that~~ claim 1 wherein the layers ~~structure is~~ are bonded to [[a]] the substrate with an MIO_2 layer.

46. (currently amended) The method according to ~~one of the preceding claims characterized in that at lest~~ claim 1 wherein the [[first]] substrate is removed.

47. (currently amended) The method according to ~~one of the preceding claims characterized in that~~ claim 1 wherein on a strained silicon region [[(5')]] an n- [[and/]] or p- MOSFET is produced.

48. (currently amended) The method according to ~~one of the preceding claims characterized in that~~ claim 1 wherein on at least a strained silicon germanium [[(Si-Ge)]] region as a nonrelaxed region of a layer, a p- MOSFET is produced.

49. (canceled)

50. (withdrawn) A layer structure comprising a layer (4', 4; 5', 5) on a substrate (1) characterized in that the layer (4', 4; 5', 5) is configured to be in part strained.

51. (withdrawn) The layer structure comprising a substrate characterized in that on the substrate (1, 2) a strained region (5') of a layer is located in a plane planar adjacent an unstrained region (5) of this layer.

52. (withdrawn) A layer structure according to the preceding claim characterized in that at least a strained region (5') of a layer is disposed on at least one relaxed region (4') of another layer.

53. (withdrawn) A layer structure according to the preceding claim characterized in that a strained region (5') of one layer is disposed between two relaxed regions of two further layers.

54. (withdrawn) A layer structure according to the preceding claim characterized in that at least a relaxed region (4') is provided in a plane in planar relationship adjacent at least one strained region (4).

55. (withdrawn) A component comprising a layer structure in accordance with one of the preceding claims 50 through 54.

56. (withdrawn) A fully depleted p-MOSFET as the component according to claim 55.

57. (withdrawn) A modulated doped field defect transistor (MODFET) or metal oxide semiconductor field effect transistor (MOSFET) as the component according to claim 55.

58. (withdrawn) A tunnel diode especially a silicon germanium (Si-Ge) tunnel diode as the component according to claim 55.

59. (withdrawn) A photodetector as the component according to claim 55.

60. (withdrawn) A laser, especially a quantum cascade laser on the basis of Si-Ge, as the component according to claim 55.